In recent years, expanded porphyrins have emerged as a new class of conjugated pyrrolic macrocycles because of their interesting optical, electrochemical, and coordination properties. Expanded porphyrins have been expected to be used for a variety of application fields such as material science and catalysis because of their unique properties. Among expanded porphyrins, meso-hexakis(pentafluorophenyl)-substituted doubly N-confused hexaphyrins were synthesized and their bis-metal complexation was established.

We report the synthesis and properties of new series of doubly N-confused hexaphyrin derivatives. Partially meso-unsubstituted doubly N-confused hexaphyrin (1) was synthesized by [3+3] or [5+1] condensation (Scheme 1). The absorption spectrum of 1 displayed an intense Soret-like band at 554 nm and the emission was observed at 1030 nm in CH$_2$Cl$_2$. The absorption of bis-Zn complex showed an intense band at 590nm. Dimeric and trimeric hexaphyrin derivatives of 1 were synthesized and will be reported their optical properties. Next, a calix-type doubly N-confused hexaphyrin (2) was synthesized by the coupling of acetone and confused tripyrrane (Scheme 2). The absorption spectrum of 2 displayed an intense band at 501 and 527 nm and that of bis-Zn complex showed at 532 nm in CH$_2$Cl$_2$. No emission band of 2 was observed. In this poster, the synthesis of the dimeric and trimeric hexaphyrin derivatives were be also repored.

**Scheme 1.** Synthetic route by [3+3] and [5+1] condensation.

**Scheme 2.** Synthesis of 2 by [3+3] condensation.


**Synthesis and Properties of Doubly N-Confused Hexaphyrin Derivatives**

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